In the Claims:

1. (Original) A method of identifying a molecule capable of inducing death of a bacterial cell, the method comprising:

(a) exposing toxin and antitoxin polypeptides of a toxin-antitoxin pair produced by the bacterial cell to a plurality of molecules; and

(b) identifying a molecule of said plurality of molecules capable of preventing or disrupting binding between said antitoxin and said toxin polypeptides, thereby identifying the molecule capable of inducing death of the bacterial cell.

2. (Original) The method of claim 1, wherein step (a) is effected by administering said plurality of molecules to bacteria expressing said toxin and antitoxin polypeptides.

3. (Original) The method of claim 1, wherein said antitoxin polypeptide is an unfolded polypeptide.

4. (Original) The method of claim 1, wherein said antitoxin polypeptide includes an amino acid sequence selected from the group consisting of SEQ ID NOs. 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120, 122 and 124.

5. (Cancelled)

6. (Original) The method of claim 1, wherein said toxin polypeptide includes an amino acid sequence selected from the group consisting of SEQ ID NOs. 69, 71, 73, 75, 77, 79, 81, 83, 85, 87, 89, 91, 93, 95, 97, 99, 101, 103, 105, 107, 109, 111, 113, 115, 117, 119, 121, 123 and 125.

7. (Cancelled)

8. (Withdrawn) A method of treating an infection of bacteria in a subject, comprising preventing or disrupting binding between a toxin and an antitoxin

polypeptides of a toxin-antitoxin pair produced in the bacteria, thereby treating the infection of the bacteria in the subject.

9. (Withdrawn) The method of claim 8, wherein said preventing or disrupting binding between said toxin and said antitoxin polypeptides is effected by providing to the subject an agent selected from the group consisting of:

(a) a compound which specifically binds to said antitoxin or said toxin;

(c) an antisense polynucleotide capable of specifically hybridizing with an mRNA transcript encoding said antitoxin;

(d) a ribozyme which specifically cleaves transcripts encoding said antitoxin; and

(e) a small interfering RNA (siRNA) molecule which specifically cleaves said antitoxin transcripts.

10. (Withdrawn) The method of claim 9, wherein said compound is selected from the group consisting of a peptide, a polynucleotide, a polysaccharide, a small organic compound and a non-biological compound.

11. (Withdrawn) The method of claim 9, wherein said compound is an antibody or an antibody fragment.

12. (Withdrawn) The method of claim 8, wherein said bacteria are pathogenic bacteria.

13. (Cancelled)

14. (Withdrawn) The method of claim 8, wherein said antitoxin polypeptide includes an amino acid sequence selected from the group consisting of SEQ ID NOs. 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120, 122 and 124.

15. (Withdrawn) The method of claim 8, wherein said antitoxin polypeptide is encoded by a polynucleotide sequence selected from the group consisting of SEQ ID NOs. 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64 and 66.

16. (Withdrawn) The method of claim 8, wherein said toxin polypeptide includes an amino acid sequence selected from the group consisting of SEQ ID NOs. 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59, 61, 63, 65 and 67.

17. (Withdrawn) The method of claim 8, wherein said toxin polypeptide is encoded by a polynucleotide selected from the group consisting of SEQ ID NOs. 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59, 61, 63, 65 and 67.

18. (Withdrawn) The method of claim 8, wherein the subject is a mammal.

19. (Withdrawn) The method of claim 8, wherein the subject is a human.

20. (Withdrawn) A pharmaceutical composition for treating an infection of bacteria, comprising an effective amount of an agent capable of preventing or disturbing binding between a toxin and an antitoxin polypeptides of a toxin-antitoxin pair produced in the bacteria.

21. (Withdrawn) The pharmaceutical composition of claim 20, wherein said agent is a compound which specifically binds to said antitoxin or said toxin.

22. (Withdrawn) The pharmaceutical composition of claim 21, wherein said compound is selected from the group consisting of a peptide, a polynucleotide, a polysaccharide, a small organic compound and a non-biological compound.

23. (Withdrawn) The pharmaceutical composition of claim 22, wherein said peptide is derived from said toxin or said antitoxin.

24. (Withdrawn) The pharmaceutical composition of claim 22, wherein said peptide includes an amino acid sequence selected from group consisting of SEQ ID NOs: 7-9.

25. (Withdrawn) The pharmaceutical composition of claim 21, wherein said compound is an antibody or an antibody fragment.

26. (Withdrawn) The pharmaceutical composition of claim 20, wherein said agent is a polynucleotide capable of specifically hybridizing with an mRNA transcript encoding said antitoxin.

27. (Withdrawn) The pharmaceutical composition of claim 20, wherein said agent is a ribozyme which specifically cleaves transcripts encoding said antitoxin.

28. (Withdrawn) The pharmaceutical composition of claim 20, wherein said agent is a small interfering RNA (siRNA) molecule which specifically cleaves said antitoxin transcripts.

29. (Withdrawn) A method of identifying toxin and antitoxin polypeptides of a toxin-antitoxin pair, comprising:

(a) identifying bacterial polynucleotide sequences at least partially homologous to polynucleotide sequences encoding known bacterial toxin and antitoxin polypeptides to thereby obtain a plurality of toxin and antitoxin encoding sequences; and

(b) determining a chromosomal position of each of said plurality of sequences, wherein toxin and antitoxin encoding sequences which are chromosomally positioned at a distance from each other which is no greater than a predetermined value encode a toxin-antitoxin pair.

30. (Withdrawn) The method of claim 29, wherein said predetermined value is ranging between 10 base pair to 150 base pair.

31. (Withdrawn) A peptide comprising at least 10 and no more than 50 amino acids, the peptide comprises the sequence set forth in SEQ ID NO: 7.

32. (Withdrawn) A peptide comprising at least 10 and no more than 50 amino acids, the peptide comprises the sequence set forth in SEQ ID NO: 8.

33. (Withdrawn) A peptide comprising at least 10 and no more than 50 amino acids, the peptide comprises the sequence set forth in SEQ ID NO: 9.